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**REMARKS**

Pursuant to the Final Office Action dated September 27, 2007, and the undersigned's telephone interview with the Examiner on November 16, 2007, claims 1-22 are presented herewith. Claims 2-5, 7, 10-12 and 15-19 are as originally presented. Claims 1, 9 and 13-14 are amended. Claims 6 and 8 were previously presented. Claims 20-22 are new. The original text of claims 1, 9 and 13-14, respectively, is presented herein. Support for claims 20-22 is provided, for example, on page 4 of the specification, lines 8-16. Applicants affirm that no new matter has been added to the patent application.

Applicants thank the Examiner for granting the aforementioned interview and hereby request careful reconsideration of this application in view of the following comments.

**Claim Rejections under 35 U.S.C. § 112**

Claims 1-19 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Claims 1-19 are also rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants hereby request withdrawal of these rejections since the subject matter referenced by the Examiner is no longer recited in the claims.

**Claim Rejections under 35 U.S.C. § 103**

Claims 1-2, 4-8 and 14-19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Karger, *et al.*, U.S. Patent No. 5,633,129 ("Karger"). Applicants request withdrawal of this rejection since the present teachings recite novel methods and other features that explicitly distinguish claims 1-2, 4-8, and 14-19 from Karger. Applicants respectfully submit that a *prima facie* case of obviousness is not present in this case for at least the following reasons.

Karger neither discloses nor suggests the use of coexistent zones or regions of the matrix specific to both heating and cooling, respectively. Karger fails to disclose, teach or fairly suggest the use of an active or deliberately cooled zone of the matrix coincident with, but independent of, a stable and autonomous heated zone. These and other features of the present teachings are

recited in Applicants' pending claims 1-19. Consequently, Applicants respectfully request withdrawal of the § 103 rejection in view of the foregoing comments.

Karger does not teach or employ the use of coexistent and autonomous zones specific to heating and cooling, respectively. It necessarily follows that Karger does not disclose or suggest a cooled zone disposed intermediate to a detection zone of the matrix and a heated zone of the matrix. Accordingly, these and other features of Applicants' teachings explicitly distinguish the pending claims from Karger.

Claims 3 and 9-13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Karger in view of Chu, *et al.*, U.S. Patent No. 6,770,698 ("Chu"). Applicants respectfully traverse this rejection.

The Chu reference has an effective filing date of June 5, 2000, more than one month after Applicants' April 25, 2000 effective filing date. Applicants' priority claim was recognized by the Office as evidenced by its inclusion of prior application data on the Filing Receipt dated February 10, 2004. A recitation of the "RELATED APPLICATIONS" section of the patent application, documenting the April 25, 2000 priority date, was also included in Applicants' reply to the Non-Final Office Action dated January 3, 2007.

Thus, the Chu reference is not available as prior art against the present application, and the Examiner's rejection under 35 U.S.C. § 103(a) is thereby rendered moot.

Applicants submit that presently pending claims 1-22 define patentably over the art and are in condition for allowance. Accordingly, entry and careful consideration of this Response and an early indication of allowance is hereby requested. If the Examiner believes there is any issue that could be resolved by a telephone conference or a personal interview, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,

Date: December 20, 2007

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